AMENDMENTS TO THE CLAIMS

Please cancel claims 8, 10, 18, and 20-24.

Please add new claims 25, 26, and 27.

Please amend claims 1, 3, 5-7, 9, 11-17, and 19.

Please replace the claims with the following listing of the claims:

1. (Currently Amended) A device for monitoring [[an]] a user's blood pressure, the device comprising:

a motion sensor for monitoring ~~localized~~ motion of the user and configured to generate motion information in response;

a [[vital-sign]] blood pressure monitor ~~for monitoring the blood pressure of the user~~ comprising an optical system comprising a light source and a light detector configured to generate a time-dependent waveform related to the user's heart beat;

a microprocessor for receiving ~~blood pressure information~~ the time-dependent waveform from the [[vital-sign]] blood pressure monitor and motion information from the motion sensor, the microprocessor comprising computer code that: 1) analyzes the time-dependent waveform from the blood pressure monitor with a mathematical model; 2) ~~distinguishing~~ analyzes the motion information from the motion sensor to distinguish between ~~blood pressure information~~ time-dependent waveforms ~~received~~ generated while ~~during localized motion of~~ the user is moving and while ~~during localized rest of~~ the user is at rest; and 3) calculates a blood pressure value from the time-dependent waveform generated when the user is at rest ~~and~~

~~a wireless transceiver for transmitting blood pressure information from the microprocessor~~.

2. (Original) The device according to claim 1 wherein the motion sensor is an accelerometer, a piezoelectric device or a mercury switch.

3. (Currently Amended) The device according to claim 1 wherein the motion sensor is a software algorithm that analyzes ~~information~~ the time-dependent waveform from the [[vital-sign]] blood pressure monitor to determine motion.

4. (Original) The device according to claim 3, wherein the software algorithm is computer code operating on the microprocessor.

5. (Currently Amended) The device according to claim [[1]] 6, further comprising a ~~wherein the~~ wireless transmitter ~~is a short range wireless transmitter~~ operating a wireless protocol based on ~~BLUETOOTH~~ 802.15.1, ~~Zigbee~~ 802.15.4, part-15, or 802.11.

6. (Currently Amended) The device according to claim 1 further comprising a ~~bracelet for housing the motion sensor, the microprocessor and the~~ wireless transmitter.

7. (Currently Amended) The device according to claim 6 further comprising a [[finger-mounted]] component ~~for housing the vital sign monitor~~ adapted to be mounted on a finger of the user.

8. (Cancelled)

9. (Currently Amended) The device according to claim [[8]] 1 wherein the optical ~~module~~ system is in communication with a pulse-oximetry circuit.

10. (Cancelled)

11. (Currently Amended) The device according to claim 1 further comprising an analog-to-digital converter in communication with the motion sensor, the ~~vital sign monitor~~ optical system, and the microprocessor.

12. (Currently Amended) A method for monitoring [[an]] a user's blood pressure, the method comprising:

determining if the user's hand is at rest or in motion using a motion sensor;

~~signaling a vital-signs monitor to generate blood pressure information~~ generating a time-dependent waveform with an optical system comprising a light source and light detector if the user's hand is determined to be at rest;

sending the ~~blood pressure information~~ time-dependent waveform to a microprocessor for processing ~~to generate a blood pressure signal for the user~~; ~~and~~

analyzing the time-dependent waveform from the optical system with a mathematical model; and

calculating a blood pressure value from the time-dependent waveform generated when the user is at rest

~~wirelessly transmitting the blood pressure signal for the user to a computer or handheld device~~.

13. (Currently Amended) The method according to claim 12 wherein determining if the user's hand is at rest comprises ~~monitoring~~ analyzing a signal sent from a motion sensor to the microprocessor with an algorithm operating on a microprocessor ~~to determine if the user's hand is at rest or in motion~~.

14. (Currently Amended) The method according to claim [[13]] 1 wherein the motion sensor is an accelerometer~~, and the accelerometer is in communication with the microprocessor~~.

15. (Currently Amended) The method according to claim [[13]] 1 wherein the motion sensor is a piezoelectric device or a mercury switch~~, in communication with the microprocessor~~.

16. (Currently Amended) The method according to claim [[12]] 1wherein the motion sensor is a software algorithm that analyzes ~~information~~ the time-dependent waveform from the [[vital-sign monitor]] optical system to determine motion.

17. (Currently Amended) The method according to claim [[12]] 27, further comprising wirelessly transmitting ~~wherein~~ the blood pressure ~~signal~~ value ~~for the user is wirelessly transmitted~~ using a radio-frequency transmitter operating a wireless protocol based on ~~BLUETOOTH~~ 802.15.1, ~~Zigbee~~ 802.15.4, part-15 or 802.11.

18. (Cancelled)

19. (Currently Amended) A system for ~~wirelessly~~ monitoring [[an]] a user's blood pressure, the system comprising:

~~a monitoring device, the monitoring device comprising~~

a motion sensor for monitoring ~~localized~~ motion of the user and configured to generate motion information in response,

a ~~vital signs~~ blood pressure monitor comprising an optical system comprising a light source and a light detector configured to generate a time-dependent waveform related to the user's heart beat ~~for monitoring the blood pressure of the user~~,

a microprocessor for receiving ~~blood pressure information~~ the time-dependent waveform from the ~~vital sign~~ blood pressure monitor and motion information from the motion sensor, the microprocessor comprising computer code that: 1) analyzes the time-dependent waveform from the blood pressure monitor with a mathematical model; 2) ~~distinguishing~~ analyzes the motion information from the motion sensor to distinguish between ~~blood pressure information~~ time-dependent waveforms ~~received during localized motion of~~ generated while the user is moving and ~~during localized rest of~~ while the user is at rest; and 3) calculates a blood pressure value from the time-dependent waveform generated when the user is at rest; and

a short-range wireless ~~transceiver~~ transmitter for transmitting blood pressure information from the microprocessor~~; and~~

~~a handheld device comprising a wireless transceiver that operates on a network~~.

20. – 24. (Cancelled)

25. (New Claim) A device for monitoring a user's blood pressure, the device comprising:

a motion sensor for monitoring motion of the user and configured to generate motion information in response;

a blood pressure monitor comprising an optical system comprising a light source and a light detector configured to generate a time-dependent waveform related to the user's heart beat;

a microprocessor for receiving the time-dependent waveform from the blood pressure monitor and motion information from the motion sensor, the microprocessor comprising computer code that: 1) analyzes the time-dependent waveform from the blood pressure monitor by taking a derivative of the waveform; 2) analyzes the motion information from the motion sensor to distinguish between time-dependent waveforms generated while the user is moving and while the user is at rest; and 3) calculates a blood pressure value from the derivative of the time-dependent waveform generated when the user is at rest.

26. (New Claim) A device for monitoring a user's blood pressure, the device comprising:

a motion sensor for monitoring motion of the user and configured to generate motion information in response;

a blood pressure monitor comprising an optical system comprising a light source and a light detector configured to generate a time-dependent waveform related to the user's heart beat;

a microprocessor for receiving the time-dependent waveform from the blood pressure monitor and motion information from the motion sensor, the microprocessor comprising computer code that: 1) analyzes the time-dependent waveform from the blood pressure monitor by fitting the waveform with a mathematical model; 2) analyzes the motion information from the motion sensor to distinguish between time-dependent waveforms generated while the user is moving and while the user is at rest; and 3) calculates a blood pressure value from parameters determined by fitting the time-dependent waveform generated when the user is at rest.

27. (New Claim) The method according to claim 12, further comprising wirelessly transmitting the blood pressure value using a radio-frequency transmitter.